

STUDY TITLE: Continuation of Monitoring Activities: Annual Assessment of Subsistence Whaling Near Cross Island

REPORT TITLE:

Monitoring Cross Island Whaling Activities, Beaufort Sea, Alaska: 2008-2012 Final Report, Incorporating ANIMIDA and cANIMIDA (2001-2007)

CONTRACT NUMBER: M08PC20029

SPONSORING OCS REGION: Alaska

APPLICABLE PLANNING AREA: Beaufort Sea

FISCAL YEARS OF PROJECT FUNDING: 06/2008-07/2013

COMPLETION DATE OF REPORT: March 2014

COSTS BY FY: Fixed Fee \$318,507, \$20,000 reimbursable (\$10,305.44 expended) - includes three modifications

CUMULATIVE PROJECT COST: \$328,812.44

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BACKGROUND: All offshore development activities and facilities in the Beaufort Sea raise major concerns for the Village of Nuiqsut and native whalers throughout the North Slope Borough about potential effects on subsistence activities, and particularly the bowhead whale hunt that occurs annually in the fall. Whalers are concerned about disruptions that alter the feeding and migration patterns of bowhead whales and other marine mammals, with the result that fall whaling crews must move further out to sea, thereby reducing success while increasing both risk and costs of the hunt. Nuiqsut whalers hunt from a logistical base on Cross Island, about fifteen miles north of Prudhoe Bay and the nearest subsistence whaling activity to existing and potential offshore oil development (Northstar, Liberty, and in Camden Bay).

In response to interagency reviews of Environmental Impact Statements and related Development and Production Plans for Northstar and the Liberty prospect, the Bureau of Ocean Energy Management (BOEM, then the Minerals Management Service – MMS) initiated a long-term and interdisciplinary impact monitoring project known as ANIMIDA (Arctic Nearshore Impact Monitoring in Development Area). Task 4 of this project focused on monitoring potential effects of offshore development on

subsistence whaling near Cross Island. Phase II of the project, now identified as cANIMIDA, included the Cross Island component as Task 7. Monitoring of the subsistence whaling activity near Cross Island was continued as a stand-alone project in 2008, and is reported on here. Annual Project reports may be available from BOEM and some early summary reports are still on their website (<http://www.boem.gov/BOEM-Newsroom/Library/Publications/Alaska-Scientific-and-Technical-Publications.aspx>). The Final report includes an analysis of all years of data from ANIMIDA (2001-2003), cANIMIDA 2004-2007), and the stand-alone effort (2008-2012), with emphasis on the last.

OBJECTIVES: This study gathered long-term monitoring data to help the MMS assess whether OCS oil development activities at Northstar and/or Liberty result in changes to bowhead whale subsistence hunting practices, or to hunting success at Cross Island. The first research question is whether Cross Island subsistence whaling displays significant variation over time. The second question is whether such variation can be attributed to offshore oil and gas industrial activities.

DESCRIPTION: Three primary methods of information collection were employed – systematic observations, collection of daily vessel locational information from handheld GPS units, and whalers’ self-reports and perceptions. The researcher employed standard ethnographic participatory observational methods by accompanying a crew to Cross Island during each whaling season, although his observations were confined to onshore activities since he could not participate in the actual hunt. All whaling boats were given handheld GPS units which recorded their tracks while searching for whales and significant point locations. “Debriefing” whalers by talking with them while examining these tracks on a computer screen after they came back from their hunt was also an important source of information.

Emphasis was placed on such measures as:

- GPS location of whale strikes, with direction and distance from Cross Island;
- Number of whales taken;
- Number and composition of whaling boats/crews using Cross island and adjacent area;
- Periodic “census” of whaling participants on Cross Island;
- Duration of whaling season by active days;
- Length of hunting trips and area searched during whaling;
- Weather and ice conditions during the seasonal hunt;
- Records of catch per unit effort (actually effort per unit catch);
- Hunters’ perception of any bowhead whale displacement, if any;
- Hunters’ perception of access problems, if any;
- Hunters’ perception of increased effort, physical risk, or cost due to bowhead displacement (including estimates for any meat spoilage), if any, with appropriate quantification.

STUDY RESULTS: Has Cross Island subsistence whaling been, or is it likely to be, affected by oil and gas activities? Past information was not adequate to examine this question, other than for the narratives from whalers of how seismic and drilling activities in the mid-1980s through the 1990s diverted the whale migration away from Cross Island. This reportedly increased the distance whalers had to travel to find and strike whales, and so decreased their success in landing whales. While this project was designed to collect quantitative measures of Cross Island whaling, and so can evaluate differences among seasons, it was not designed to collect similar information about oil and gas activities. Furthermore, the very activities to which whalers objected in the mid-1980s through the 1990s were specifically prohibited during the whaling seasons documented for this project. Northstar was primarily in production mode during this period, and whalers noted few if any direct effects of Northstar on their whaling activities – other than that the whalers themselves avoided scouting for whales near Northstar. The lack of effects was attributed primarily to Northstar being west of Cross Island, while the whales were coming from the east and so did

not encounter any potential disturbance from Northstar until they had passed Cross Island and the Nuiqsut whalers. The whalers did not consider avoiding the Northstar area a major effect since their primary (preferred) search area for whales is to the NE of Cross Island – although in years when access to this search area is restricted, the “Northstar effect” may be more significant. Nuiqsut whalers report seeing feeding whales in that area, and landed a whale in that area in 1997 (before Northstar development).

The variability between and among individual seasons that the project did document was primarily due to differences in ice and wind conditions, the distribution (distance from Cross Island) and apparent abundance (how many whales the whalers could find) of whales, and the behavior (“normal” or “skittish”) of whales. Further, differences among the seasons in terms of effort expended (in terms of “boat hours”) could be fairly well quantified. However, the relationship between variability in terms of effort and variability of ice and wind conditions, or whale distribution, or whale behavior, were not as clear-cut. Ice conditions present during the twelve seasons either prevented access to whales altogether, or had no net effect (except perhaps by its absence in most seasons). Adverse weather conditions hinder whaling, but the shortest seasons were those that were measurably the worst in terms of weather. Perhaps the least ambiguous factor associated with the effort expended per landed whale was the distance of whales from Cross Island (the distance from Cross Island that whalers found whales). The two were directly related – the greater the distance, the greater the effort.

Differences in Cross Island whaling behavior were documented, and most easily discussed in terms of two time spans, 2001-2006 and 2007-2012. Whaling seasons during 2001-2006 were general three weeks or longer. Seasons during 2007-2012 were generally two weeks long. For the earlier period, the normative “traditional” norms of whaling were generally followed. These norms were only one whale should be landed a day, all crews should assist in chasing and killing a struck whale, and all crews should help butcher that whale. No crew should resume scouting until butchering the landed whale was completed. For the 2007-2012 seasons these norms were relaxed – multiple whales were commonly landed on the same day, crews resumed scouting before butchering landed whales was completed, and so not all crews assisted other crews as much as in the past. These changes were apparently responses to increased unpredictability in environmental whaling conditions (weather, ice, sea state), and other influences favoring a reduction in the length of the whaling season (planned oil and gas activities, whaler employment and other time constraints). Local ice conditions during the 2005 and 2006 seasons were particularly constraining and may have been an especially important factor for the behavioral changes evident for the period 2007-2012.

STUDY PRODUCTS (does not include products for 2001-2007 contracts):

- Galginaitis, M. 2009a. Annual Assessment of Subsistence Bowhead Whaling Near Cross Island, 2008: Annual Report. OCS Study MMS Contract M08PC20029. Report from Sociocultural Research, Anchorage, AK, for the U.S. Minerals Management Service, Anchorage, AK.
- Galginaitis, M. 2009b. Annual Assessment of Subsistence Bowhead Whaling Near Cross Island, 2001-2007: Final Report, cANIMIDA Task 7. OCS Study MMS 2009-038. Report from Sociocultural Research, Anchorage, AK, for U.S. Minerals Management Service, Anchorage, AK. 93 p. + CD-ROM.
- Galginaitis, M. 2010. Annual Assessment of Subsistence Bowhead Whaling Near Cross Island, 2009: Annual Report. OCS Study MMS Contract M08PC20029. Report from Sociocultural Research, Anchorage, AK, for Bureau of Ocean Energy Management, Anchorage, AK.
- Galginaitis, M. 2011. Annual Assessment of Subsistence Bowhead Whaling Near Cross Island, 2010: Draft Annual Report. OCS Study BOEMRE Contract M08PC20029. Report from Sociocultural Research, Anchorage, AK, for the Bureau of Ocean Energy Management, Anchorage, AK.

- Galginaitis, M. 2012. Annual Assessment of Subsistence Bowhead Whaling Near Cross Island, 2011: Annual Report. OCS Study BOEMRE Contract M08PC20029. Report from Sociocultural Research, Anchorage, AK, for Bureau of Ocean Energy Management, Anchorage, AK.
- Galginaitis, M. 2013a. Annual Assessment of Subsistence Bowhead Whaling Near Cross Island, 2012: Transmission of Summary Data. In lieu of Annual Report, pending final summary report in mid-2013. OCS Study BOEM Contract M08PC20029. Report from Sociocultural Research, Anchorage, AK, for Bureau of Ocean Energy Management, Anchorage, AK.
- Galginaitis, M. 2013b. Iñupiat Fall Whaling and Climate Change – Observations from Cross Island. Paper presented at the 28th Lowell Wakefield Fisheries Symposium, Anchorage, AK, March 28, 2012 . Submitted to appear in the electronically published papers of the symposium.
- Galginaitis, M. 2013c. Annual Assessment of Subsistence Bowhead Whaling Near Cross Island, 2001-2007: Final Report. OCS Study BOEMRE Contract M08PC20029. Report from Sociocultural Research, Anchorage, AK, for Bureau of Ocean Energy Management, Anchorage, AK.
- Galginaitis, M. 2013d. An Overview of Cross Island subsistence bowhead whaling, Beaufort Sea, Alaska. *Alaska Journal of Anthropology*, Volume 11 (accepted, in final stages of editing).
- Data Archive. MMS and NSB archival copies, not for public distribution, GPS and Excel data.

Project Area Map

